

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. – 10. (Cancelled)

11. (Currently Amended) ~~The method as claimed in claim 7A method of fabricating a layer on a substrate, the method comprising:~~

forming the layer, the step of forming the layer including using carbon dioxide;
and

the step of forming the layer including depositing a sulphur-containing compound
that includes a moiety represented by the formula:

Y-(CF₂)_m-CF₂-(CH₂)_n-CH₂-X,

where X is sulphur,

Y is a functional group,

m and n denote a number of fluorinated and non-fluorinated carbon atoms,
respectively, and

wherein m and n lie within the range of 1 to 20.

12. (Previously Presented) The method as claimed in claim 11, wherein m and n lie within the range of 5 to 10.

13. (Previously Presented) The method as claimed in claim 12, where m is 8 and n is 10.

14. (Currently Amended) The method as claimed in claim [7] 11, wherein Y further includes at least one of vinyl, styryl, acryloyl, methacryloyl or and alkyne in combination with a spacer group.

15. (Currently Amended) The method as claimed in claim 14, wherein the spacer group includes at least one of CH_2 or and CF_2 .

16. (Currently Amended) The method as claimed in claim 11, wherein the substrate includes at least one of glass, mica, SiO_2 , Al_2O_3 , Ga_2O_3 or ITO gold, silver, copper, iron, mercury, palladium, gallium arsenide, ferrous oxide, and indium tin oxide.

17. (Currently Amended) ~~The method as claimed in claim 16, wherein the substance includes a semi-fluorinated silane derivative of the formula:~~

Y

/

$[\text{F}_2\text{C}]_m$

\

CF_2



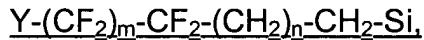
+



A method of fabricating a layer on a substrate, the method comprising:
forming the layer, the step of forming the layer including using carbon dioxide;

and

the step of forming the layer including depositing a silicon containing compound
that includes a moiety represented as the formula:



where Y includes is a functional group; and

m and n denote respectively the number of fluorinated and non-fluorinated carbon atoms, respectively; and

m and n lie within the range of 1 to 20.

18. (Currently Amended) The method as claimed in 17, wherein the
compound has an alkoxy group on the Si atom includes a trialkoxy derivative.

19. (Currently Amended) The method as claimed in claim 18, wherein
the compound has a chlorine atom on the Si atom includes at least one of SiCl₃,
Si(OCH₃)₃, Si(OCH₂CH₃)₃, Si(OCH₃)₂Cl or Si(CH₂CH₃)₂Cl.

20. (Previously Presented) The method as claimed in claim 17, wherein Y includes a CF_3 functional group.

21. (Currently Amended) The method as claimed in claim 17, wherein m and n lie within the range of 1 to 20 the substrate includes at least one of glass, mica, SiO_2 , Al_2O_3 , Ga_2O_3 , and ITO.

22. (Previously Presented) The method as claimed in claim 21, wherein m and n lie within the range of 5 to 10.

23. (Previously Presented) The method as claimed in claim 22, wherein m is 6 and n is 1.

24. (Currently Amended) The method as claimed in claim 17, wherein Y further includes at least one of vinyl, styryl, acryloyl, methacryloyl, and or alkyne in combination with a spacer group.

25. (Previously Presented) The method as claimed in claim 24, wherein the spacer group includes at least one of CH_2 or CF_2 .

26. (Currently Amended) The method as claimed in claim 11, wherein the layer has an ellipsometry thickness of about 30Å and a water contact angle of about 110°.

27. – 30. (Canceled)

31. (NEW) The method as claimed in Claim 17, wherein the layer has an ellipsometry thickness of about 30Å and a water contact angle of about 110°.

32. (NEW) The method according to claim 11, the step of forming the layer including using a supercritical condition.

33. (NEW) The method of claim 11, the step of forming the layer including using a co-solvent in combination with carbon oxide.

34. (NEW) The method as claimed in claim 33, wherein the co-solvent comprises at least one of H₂O, CH₃OH, CF₃OH, CF₃CH₂OH, CF₃CF₂OH, (CF₃)₂CHOH, CH₄, C₂H₄, C₂F₆, CHF₃, CCIF₃, C₂H₆, SF₆, propylene, propane, NH₃, pentane, iPrOH, MeOH, EtOH, iBuOH, benzene, and pyridine.

35. (NEW) The method according to claim 17, the step of forming the layer including using a supercritical condition.

36. (NEW) The method according to claim 17, the step of forming the layer using a co-solvent in combination with carbon oxide.

37. (NEW) The method as claimed in claim 36, wherein the co-solvent comprises at least one of H₂O, CH₃OH, CF₃OH, CF₃CH₂OH, CF₃CF₂OH, (CF₃)₂CHOH, CH₄, C₂H₄, C₂F₆, CHF₃, CClF₃, C₂H₆, SF₆, propylene, propane, NH₃, pentane, 'PrOH, MeOH, EtOH, 'BuOH, benzene, and pyridine.